REMARKS

Claims 1-8, 10, 11, 13-16, 21, 23-27, 29-31 and 36 were rejected under §102 as being anticipated by, or in the alternative, under §103 as being obvious from Cohen (U.S. Patent No. 5,156,148). Claims 17-20, 22, 35 and 37-43 were rejected as being anticipated by Cohen. Claims 9, 28, and 32-34 were rejected as being obvious from Cohen. The application of Cohen is the same for independent claims 1, 17, 23, 35 and 40.

In the Applicant's previous arguments filed October 7, 2003, notice was drawn to claim 1 as specifying a processor that determines whether an arrhythmia is atrial or ventricular as a function of the sensed cardiac electrical signals. Drug delivery is activated based upon a determination that the arrhythmia is atrial or ventricular. Claims 17, 23, 35 and 40 were similarly directed. Then, notice was drawn to the fact that while Cohen discloses a system for the treatment of cardiac arrhythmias, Cohen distinguishes itself from "rate-only" systems that detect and identify an arrhythmia on the basis of sensing only heart rate. Cohen considers such systems to inadequately differentiate between hemodynamically stable and unstable rhythms. Cohen therefore teaches to combine a physiologic parameter indicative of the hemodynamic condition of the patient with an electrical rate signal derived from the heart (see col. 4, lines 10-15 and lines 19-26). Thus, the processor in Cohen identifies atrial and ventricular arrhythmias as a function of both a physiologic signal and a cardiac electrical signal (see col. 4, line 67 to col. 5, line 13). This is clearly depicted in Fig. 1 also.

The argument was made based on the teachings of Cohen that Cohen fails to disclose and in fact teaches away from the system of claim 1 wherein the processor

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discriminates between atrial arrhythmia and ventricular arrhythmia as a function of sensed cardiac electrical signals and without confirmation from a physiologic sensor. On that basis, the contention was made that Cohen fails to either anticipate or render obvious the pending claims of the present application.

In response to Applicant's arguments, the Final Office Action, at page 6, dismisses the distinction of the claimed invention over Cohen because the claim language does not preclude determination of atrial and ventricular arrhythmias as a function of more than one variable, saying that: "A system that is a function of x and y is still a system that is a function of x."

Applicant has amended claim 1 to recite: "a processor configured to receive the electrical signals, to detect cardiac arrhythmia only from the electrical signals, to discriminate between an atrial arrhythmia and a ventricular arrhythmia as a function of only the electrical signals, and to generate an arrhythmia signal as a function of the type of arrhythmia discriminated from the electrical signals." Claims 11, 17, 23, 35 and 40 have been similarly amended.

With the amendments to claims 1, 17, 23, 35 and 40, Cohen is distinguishable and does not anticipate or render obvious any of the pending claims. Moreover, while the amendments to the claims distinguish Cohen's use of a physiologic parameter indicative of a patient's hemodynamic condition, the scope of the amendments is nevertheless sufficiently broad in scope to include arrhythmia detection algorithms that are not "rate-only" but include various detection criteria such as a sustained series of short R-R or P-P intervals of an average rate, rate of onset, high rate stability, and others as set forth at pages 14 and 15 of the application. The amendment made to the

claims only disclaims a system in accordance with Cohen wherein a parameter indicative of hemodynamic condition of the patient is relied upon in making a determination as to whether a patient's heart is malfunctioning.

Applicant submits that all pending claims are in condition for allowance and requests that a notice of allowance should be issued in due course.

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Respectfully submitted,

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